

```

10      19      28      37      46      55
5'-TGAT GCT CTG GGC TGT CTT CAC ACT TCA TTT GGG TTT CCT GCT TGC TCT GAG CTC

64      73      82      91      100      109
TAC AGG GGA ATG GGG TAG AGA TGG GAG CCA CCT TGG GTG GAG GGT GGG GAA GGT

118      127      136      145      154      163
ATG TTC TGC CCA CAG GTG TCA TGC TCA CTC AGC CTG ATG CCC AGG CTG CCA
M F C P P Q V S C S L S L M P R L P

172      181      190      199      208      217
AGT ATA AGG CAT TGG CAG GGG CCC AGC CAC CCT GGG TTC CTT GGT CCC CTA TTC
S I R H W Q G P S S H P G F L G P L F

226      235      244      253      262      271
CCC ATC TGC TCC CTG CAG TGG CCC CAT GGG TTC TCT TCT GCC ATC TTC CCA GGC CTG
P I C S L Q W P H G F S A I F P G L

280      289      298      307      316      325
CTG GAT GTG TAT GGA TTT GAA TCA TTT CCT GAC AAC AGT CTG GAA CAG TTG TGC
L D V Y G F F S F P P D N S L E Q L C

334      343      352      361      370      379
ATC AAC TAC GCC AAT GAG AAG CTG CAG CAG CAT TTT GTG GCT CAC TAC CTA AGG
I N Y A N E K L Q Q H F V A H Y L R

```

FIGURE 1A

FIGURE 1B

766	775	784	793	802	811
CCC AAA GAG AAG ACC CAG GAG GAA CCC CCT GGC CAG AGC AGG GCC CCT GTG TGT					
P K E K T Q	E E P P G Q	S R A P V L			
820	829	838	847	856	865
ACC GTG GTG TCC AAG TTC AAG GCC TCA CTG GAG CAG CTT CTG CAG GTC CTA CAC					
T V V S K F K A S L E Q L Q V L H					
874	883	892	901	910	919
AGC ACC ACG CCC CAC TAC ATT CGC TGC ATC AAG CCC AAC AGC CAG GGC CAG GCG					
S T T P H Y I R C I K P N S Q G Q A					
928	937	946	955	964	973
CAG ACC TTT CTC CAA GAG GAG GTC CTG AGC CAG CTG GAG GCC TGT GGC CTC GTG					
Q T F L Q E E V L S Q L E A C G L V					
982	991	1000	1009	1018	1027
GAG ACC ATC CAT ATC AGT GCT GCT GGC TTC CCC ATC CGG GTC TCT CAC CGA AAC					
E T I H I S A A G F P I R V S H R N					
1036	1045	1054	1063	1072	1081
TTT GTA GAA CGA TAC AAG TTA CTA AGA AGG CTT CAT CCT TGC ACA TCC TCT GGC					
F V E R Y K L L R R L H P C T S S G					
1090	1099	1108	1117	1126	1135
CCC GAC AGC CCA TAT CCT GCC AAA GGG CTC CCT GAA TGG TGT CCA CAC AGC GAG					
P D S P Y P A K G L P E W C P H S E					

FIGURE 1C

1144 GAA GCC ACG CTT GAA CCT CTC ATC CAG GAC ATT CTC CAC ACT CTG CCG GTC CTA 1189  
E A T L E P L I Q I D I L H T L P V L

1198 ACT CAG GCA GCA GCC ATA ACT GGT GAC TCG GCT GAG GCC ATG CCA GCC CCC ATG 1243  
T Q A A A I T G D S A E A M P A P M

1252 CAC TGT GGC AGG ACC AAG GTG TTC ATG ACT GAC TCT ATG CTG GAG CTT CTG GAA 1297  
H C G R T K V F M T D S M L E L E

1306 TGT GGG CGT GCC CGG GTG CTG GAG CAG TGT GCC CGC TGC ATC CAG GGT GGC TGG 1351  
C G R A R V L E Q C A R C I Q G G W

1360 AGG CGA CAC CGG CAC CGA GAG CAG GAG CGG CAG TGG CGG GCC GTC ATG CTC ATC 1405  
R R H R H R E Q E R Q W R A V M L I

1414 CAG GCA GCC ATT CGT TCC TGG TTA ACT CGG AAA CAC ATC CAG AGG CTG CAT GCA 1459  
Q A A I R S W L T R R K H I Q R L H A

FIGURE 1D

1468	1477	1486	1495	1504	1513
GCT GCC ACA GTC ATC AAG CGT GCA TGG CAG AAG TGG AGA ATC AGA ATG GCC TGC					
A A T V I K R A W Q K W R I R M A C					
1522	1531	1540	1549	1558	1567
CTT GCT GCT AAA GAG CTG GAT GGT GTG GAA GAA AAA CAC TTC TCT CAA GCT CCC					
L A A K E L D G V E E K H F S Q A P					
1576	1585	1594	1603	1612	1621
TGT TCC CTG AGC ACC TCG CCG CTG CAG ACC AGG CTC CTG GAG GCA ATA ATC CGC					
C S L S T S P L Q T R L L E A I I R					
1630	1639	1648	1657	1666	1675
CTC TGG CCC CTG GGA CTG GTC CTG GCC AAT ACG GCT ATG GGT GTA GGC AGC TTT					
L W P L G L V L A N T A M G V G S F					
1684	1693	1702	1711	1720	1729
CAG AGG AAA TTA GTG GTC TGG GCT TGC CTC CAG CTC CCC AGG GGC AGC CCC AGT					
Q R K L V V W A C L Q L P R G S P S					
1738	1747	1756	1765	1774	1783
AGC TAC ACT GTC CAG ACA GCA CAA GAC CAG GCT GGT GTC ACG TCC ATC CGA GCG					
S Y T V Q T A Q D Q A G V T S I R A					
1792	1801	1810	1819	1828	1837
CTG CCT CAG GGA TCG ATA AAG TTT CAC TGC AGA AAG TCT CCA CTG CGG TAT GCT					
L P Q G S I K F H C R K S P L R Y A					

FIGURE 1E

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1846 1855 1864 1873 1882 1891  
 GAC ATC TGC CCT GAA CCT TCA CCC TAC AGC ATT ACA GGC TTT AAT CAG ATT CTG  
 D I C P E P S P Y S I T G F N Q I L  
  
 1900 1909 1918 1927 1936 1945  
 CTG GAA AGA CAC AGG CTG ATC CAC GTG ACC TCT TCT GCC TTC ACT GGG CTG GGG  
 L E R H R L I H V T S S A F T G L G  
  
 1954 1963 1972 1981 1990 1999  
 TGA TCC TTG GTG CCT TTG TTT CCA CAA GGC CTT TTC CTG CCC CCT GCC TTG CCA  
  
 2008 2017 2026 2035 2044 2053  
 AAG ACA TTT AAT CAG CAC ACA GCT GCC AGA CTA TTC CCA CAG TGC TCC AAA TGC  
  
 2062 2071 2080 2089 2098 2107  
 ACA TGA ACA ACA GTG ACG GGC TCA GCT TCG ACC CAG AGC CCC GTG CCC AGT GCG  
  
 T 3'

FIGURE 1F

09830914.050201

FIGURE 2A

FIGURE 2B



FIGURE 2C

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82	Q	H	F	V	A	H	Y	L	R	A	Q	Q	E	E	Y	A	V	E	G	L	E	W	S	F	I	N	Y	Q	D	N	1929760
519	Q	Q	F	N	Q	H	V	F	K	L	E	Q	E	E	Y	I	R	E	E	I	E	W	V	R	V	D	F	H	D	N	g1279777
511	Q	H	F	N	R	H	L	F	K	L	E	Q	E	E	Y	I	Q	D	G	I	D	W	A	K	V	D	F	E	D	N	g2444174
112	Q	P	C	L	D	L	I	E	G	S	P	I	S	I	C	S	L	I	N	E	E	C	R	-	L	N	R	P	S	S	1929760
549	Q	P	A	I	D	L	I	E	G	-	P	V	G	M	I	N	L	L	D	E	Q	C	K	R	L	N	G	S	D	A	g1279777
541	Q	D	C	L	N	L	F	E	K	K	P	L	G	L	M	T	L	L	D	E	E	S	T	F	P	N	G	T	D	M	g2444174
141	A	R	Q	L	Q	T	R	I	E	T	A	L	A	G	S	P	C	L	G	H	N	K	L	S	R	E	P	S	F	I	1929760
578	D	W	L	S	Q	L	Q	N	S	T	E	L	K	R	N	P	Q	L	A	F	P	K	V	-	R	S	N	D	F	I	g1279777
571	T	F	A	T	K	L	K	Q	-	-	H	L	K	T	N	S	-	-	C	F	R	G	E	-	R	G	K	A	F	T	g2444174
171	V	V	H	Y	A	G	P	V	R	Y	H	T	A	G	L	V	E	K	N	K	D	P	I	P	P	E	L	T	R	L	1929760
607	V	R	H	F	A	A	D	V	T	Y	S	T	D	G	F	V	E	K	N	R	D	A	I	G	E	Q	L	L	D	V	g1279777
596	V	H	H	Y	S	G	E	V	T	Y	D	T	S	G	F	L	E	K	N	R	D	L	L	H	L	D	S	I	Q	L	g2444174
201	L	Q	Q	S	Q	D	P	L	L	M	G	L	F	P	T	N	P	K	E	K	T	Q	E	E	P	-	-	-	-	-	1929760
637	V	V	A	S	K	F	P	F	I	R	T	V	I	G	S	T	A	P	T	S	V	S	S	S	S	S	-	-	-	S	g1279777
626	L	S	S	C	T	C	E	L	P	Q	A	F	A	S	N	M	L	S	L	S	E	K	P	V	P	G	P	L	H	K	g2444174
226	P	G	Q	S	R	A	P	V	L	T	V	V	S	K	F	K	A	S	L	E	Q	L	L	Q	V	L	H	S	T	T	1929760
665	T	P	G	K	R	T	I	K	K	T	V	A	S	Q	F	R	D	S	L	K	E	L	M	S	V	L	C	S	T	R	g1279777
656	S	G	G	A	D	S	Q	K	L	S	V	V	T	K	F	K	G	Q	L	F	Q	L	M	Q	R	L	E	S	T	T	g2444174

FIGURE 2D

09830914.050201

256	P	H	Y	I	R	C	I	K	P	N	S	Q	G	Q	A	Q	T	F	L	Q	E	E	V	L	S	Q	L	E	A	C	1929760
695	P	H	Y	V	R	C	I	K	P	N	D	S	K	I	S	F	D	F	E	P	K	R	A	I	Q	Q	L	R	A	C	g1279777
686	P	H	F	I	R	C	I	K	P	N	N	S	Q	S	P	G	I	Y	H	Q	G	L	V	L	Q	Q	L	R	C	C	g2444174
286	G	L	V	E	T	I	H	I	S	A	A	G	F	P	I	R	V	S	H	R	N	F	V	E	R	Y	K	L	L	R	1929760
725	G	V	L	E	T	V	R	I	S	A	A	G	F	P	S	R	Y	P	Y	E	E	F	A	R	R	Y	R	V	I	Y	g1279777
716	G	V	L	E	V	R	I	S	R	S	G	F	P	T	R	M	S	H	Q	K	F	A	R	R	Y	G	F	L	L	g2444174	
316	R	L	H	-	-	-	-	-	-	-	-	-	-	-	-	-	-	P	C	T	S	S	G	P	D	S	P	Y	P	A	1929760
755	T	K	E	A	A	L	W	R	D	K	P	K	Q	F	A	E	L	A	C	Q	Q	C	L	E	E	G	K	Y	A	V	g1279777
746	L	E	H	V	A	S	Q	D	P	L	S	V	S	V	A	I	L	H	Q	F	D	I	L	P	E	-	M	Y	Q	I	g2444174
332	K	G	L	P	E	W	C	P	H	S	E	E	A	T	L	E	P	L	I	Q	D	I	L	H	T	L	P	V	L	T	1929760
785	G	K	T	K	I	F	L	R	T	G	Q	V	A	V	L	E	R	V	R	L	D	T	L	A	A	A	T	V	I	g1279777	
775	G	Y	T	K	L	F	F	R	T	G	Q	I	G	K	L	E	D	T	R	N	R	T	L	N	G	I	L	R	V	-	g2444174
362	Q	A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1929760	
815	Q	K	M	W	K	G	F	L	A	R	R	K	Y	E	T	M	R	R	S	L	L	I	V	Q	A	S	L	K	A	F	g1279777
804	Q	S	C	F	R	G	H	K	A	R	Q	Y	M	K	E	L	K	R	G	I	F	N	L	Q	A	F	A	R	G	E	g2444174
379	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1929760	
845	L	A	F	R	R	I	K	Y	L	-	Q	M	H	R	A	V	I	V	M	Q	S	A	V	R	G	Y	L	E	R	R	g1279777
834	K	T	R	K	E	F	A	I	L	V	H	R	H	R	A	A	V	H	I	Q	K	H	I	K	A	K	I	S	K	K	g2444174

FIGURE 2E

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388	- - - - -	TDSMLELLECGRAVL	- - - - -	1929760
874	KYEQIRDS	IIGIQAMFKANRVR	RYVEKLR	Yg1279777
864	RFE DVHGA	TTITLQAV	- - - - -	g2444174
404	EQCARCIQGGWRH	- RHREQERQWR	AVMLI	1929760
904	EKSAITIQAAWR	GYLARREQ	IANRKKV	VMVg1279777
879	- - - - -	- - - - -	- - - - -	g2444174
433	QAARSWL	TRK	- - - - -	1929760
934	QCAVR	KWLAKRRRLRELK	IEARSVGH	HLQKL
879	- - - - -	IRGWLVR	RCSGDIAL	- - - - -
450	AA	- - - - -	- - - - -	1929760
964	TGL ENK	IIELQMR	LDIANARTKEEA	EKFATg1279777
894	- - - - -	- - - - -	LQFGSGKNGS	DE - - - - -g2444174
452	- - - - -	- - - - -	- - - - -	1929760
994	ASKNLQK	TKADLAMMEAE	RLTLLEARN	VEg1279777
907	- - - - -	- - - - -	VLVKSSYLAE	LQRR - - - - -g2444174
452	- - - - -	- - - - -	- - - - -	1929760
1024	VLQEEV	ERLETECDLKEA	QRGGMET	KMVELg1279777
921	ILKAEAG	LR - - - - -	KEEENDILH	QRLQYg2444174

FIGURE 2F

FIGURE 2G

481	- - - - -	S I R V G E L E G A Y N R L K N D M E R L V S G E N G A T H	- - - - -	1929760
1234	- - - - -	- - - - - S Y D D S E R N S D A S I N T A N D E T N	- - - - -	g1279777 g2444174
982	- - - - -	- - - - -	- - - - -	
481	- - - - -	- - - - -	H F S Q	1929760
1264	S V F E R I M E E N E R L R E E A V E L R S M L S H F E K	- - - - -	- - - - -	g1279777 g2444174
1003	P P W D - - A A T N G R - R N G V E N V R P M - - - - -	- - - - -	- - - - -	
485	A P - - - - -	C S - - - - -	- - - - -	1929760
1294	Q S V A G S S G Y R R S P R P D S G H C S G A D S E D G S S	- - - - -	- - - - -	g1279777 g2444174
1023	- - - - -	- - - - -	- - - - -	
489	- - - - -	- - - - -	- - - - -	1929760
1324	G A D L E E D L C I E R Q C R H L K N L A E N L T K M L T N	- - - - -	- - - - -	g1279777 g2444174
1023	- - - - - S A G L S V - - - - -	- - - - -	- - - - -	
489	- - - - -	L S T S P L Q - - - - -	- - - - -	1929760
1354	Q N L E I E R L Q Q Q L R F S E S Q T V F R P S D C S L D E	- - - - -	- - - - -	g1279777 g2444174
1029	- - - - - I S R L A E E - - F E Q R S Q V F - G D D A K F L V	- - - - -	- - - - -	
496	- - - - -	- - - - -	- - - - -	1929760
1384	A V R G A H K Q T Q L L A Q Q N M D L N D K L T R Q S E E L	- - - - -	- - - - -	g1279777 g2444174
1052	E V K S G Q V E A N L - - - - -	- - - - -	- - - - -	

FIGURE 2H

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[illegible]

FIGURE 2I

511	- - - - -	V L A N T A M	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	1929760
1594	I E H V L	S P K I V P G I L Q H E S S D L M T A G Q E R R	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	g1279777
1088	- - - - -	E T K V I L N K L G H E D	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	g2444174
518	- - - - -	G V G S F Q R K	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	1929760
1624	D R N S	G S V E S Q R K	S L D D L L Q F M E I V H T K L T	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	g1279777
1101	- - - - -	G D G E K G K	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	g2444174
526	- - - - -	- - - - -	- - - - -	L V V W A C	- - - - -	L Q L P	- - - - -	- - - - -	- - - - -	1929760
1654	Y G G D D I V V K Q V I G Q M A R W M C	A L A L N Y M M F R	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	g1279777
1109	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	g2444174
537	G S P S S Y	- - - - -	T V Q T A Q D Q A G V T S	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	1929760
1684	R E L C N F E K A I Q	I K H N V T Q I Q N W L N A K G L S D	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	g1279777
1111	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	g2444174
556	- - - - -	I R A L P Q G S I K F H C R K S P L R Y A D I C P E	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	1929760
1714	C R D H F E P L V Q	A C H L L Q S R K D P S N L D T L C G E	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	g1279777
1112	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	g2444174
582	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	1929760
1744	M T S R L K P R Q V V A I L Q H Y D	P S P Y S I T G F N Q I	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	g1279777
1112	- - G R L N S S	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	g2444174

FIGURE 2J



594	L L	- - - - -	- - - - -	- - - - -	- - - - -	E R H R L I H V T	1929760
11774	F L	V Q I Q K K L N E R A I A N N D P I E D K D K L I M L G					g1279777
1118	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	g2444174
605	S - - - S A F T G	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	1929760
1804	T Y L P P F F D T Q P F S Y S D F P L E T L S L P S C L H M Q						g1279777
1118	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	g2444174
611	- - - - - L G						1929760
1834	S V C R L V						g1279777
1118	- - - - - R V N						g2444174